




Department of Energy
Washington, DC 20585

DEC 29 2005

MEMORANDUM FOR DISTRIBUTION

FROM:


DR. INÉS R. TRIAY
CHIEF OPERATING OFFICER FOR
ENVIRONMENTAL MANAGEMENT

SUBJECT:

Inappropriate Use of Personal Protective Equipment

The Office of Environmental Management (EM) has recently experienced an instance in which an electrician was slightly injured while measuring voltages inside an energized 480-volt panel. In this event, an electrical multi-meter, purchased by credit card, and devoid of any certifying laboratory marking, failed. The subsequent arc flash melted the radiological anti-contamination clothing of one of the workers. None of the workers present were wearing the appropriate electrical safety personal protective equipment (PPE).

I am very concerned by the lack of safety commitment demonstrated by these workers during this event. It is clear that the lessons from the recent Type A investigation into the arc flash at the Stanford Linear Accelerator Center (SLAC) were either not adequately disseminated across EM or, if they were, not heeded by these workers. In either case, this is an apparent breakdown in our safety posture since the SLAC event clearly pointed out the need for appropriate electrical PPE in a radiologically contaminated environment. As an immediate corrective measure and a condition to continuing to perform work at an EM site, you should reaffirm the commitment of your site contractors to working safely. You should also take the necessary steps to ensure the lessons from the SLAC event, under the Occurrence Reporting and Processing System (ORPS) report number SC-OAK-SU-SLAC-2004-0010, are not missed a second time and our workers are adequately protected from this obvious and well known hazard.

Under no circumstances will future EM work not be conducted in accordance with the appropriate electrical safety requirements. The attached Safety Alert describes recommended actions to ensure electrical safety requirements are in place. I am directing you to take the necessary steps to implement these recommendations as requirements for all EM work at your site. You should ensure that these requirements flow down to all appropriate contractors and their subcontractors. In addition, I want to reiterate the direction provided by Mr. Dae Y. Chung earlier this month to remove all CEN-TECH Digital Multimeters identified in ORPS report number EM-OH-FCP-FFI-FEMP-2005-0043 and any other non-Underwriters Laboratories Inc. certified equipment from your site. Please inform me when you have completed all the above efforts.



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I continue to seek recommendations for improving the processes for safely performing our work. If you have any questions, please call me at (202) 586-0738 or Mr. Dae Y. Chung, Acting Deputy Assistant Secretary for Integrated Safety Management and Operations Oversight, at (202) 586-5151.

Attachment

cc:

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Office of Environmental Management Safety Alert

Electrical Personal Protective Equipment

December 2005

Purpose:

The purpose of this Alert is to initiate immediate action on a significant safety issue involving Office of Environmental Management (EM) work. The use of electrical Personal Protective Equipment (PPE), while working on or near live electrical equipment that has the potential of an electrical arc or flash, will be enforced at all EM facilities.

Background:

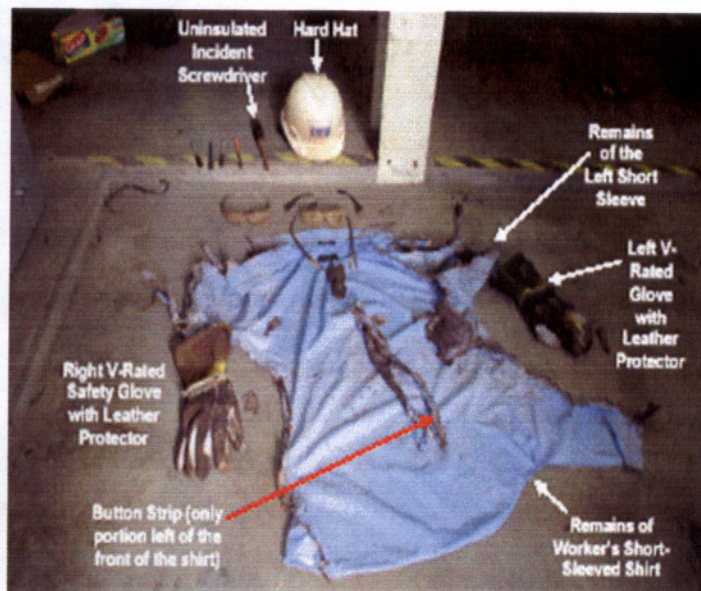
Much of EM's remediation work is inherently dangerous. It is, therefore, of critical importance for EM workers to use the proper PPE for the associated hazards involved in their job activity. There have been a number of recent incidents involving the inappropriate use of PPE across EM sites that have or could have resulted in serious injury to EM workers.

The two incidents of burned PPE shown below reveal how electricians were injured while working on energized high voltage electrical panels in a radiologically contaminated environment. The electricians were wearing some form of PPE but not the appropriate electrical safety PPE.



8151-D0036

A 480-volt arc flash melted the radiological anti-contamination clothing worn by an EM Fernald Closure Project (FCP) electrician.



A Stanford Linear Accelerator Center (SLAC) electrician was seriously injured from an arc flash while working on a 480-volt energized electrical panel.

The above incident at SLAC resulted in a Type A investigation. The lessons from the SLAC event emphasized the need for appropriate electrical PPE, while working in a radiologically contaminated environment. These lessons were apparently not incorporated into EM work practices at the FCP.

The Department of Energy (DOE) O 440.1A directs all DOE elements to implement a worker protection program that complies with the National Fire Protection Association (NFPA) 70E Standard for Electrical Safety in the workplace. The workers involved in the events at SLAC and FCP could have clearly benefited from the protection offered by the NFPA 70E standard. Therefore, EM must be committed to expecting the worst case scenario when workers are working on or are near live electrical equipment that has the potential of producing an electrical arc or flash.

Office of Environmental Management Safety Alert

Electrical Personal Protective Equipment

December 2005

Implications:

DOE has experienced some significant electrical events recently that have resulted in injury to workers. From calendar year 2004 to 2005, DOE has experienced a 30 percent increase in both electrical shocks and burns. EM should assume that serious injuries or even fatalities are possible when working with or near live electrical equipment. Therefore, all workers should be provided with the appropriate electrical PPE to protect them from serious harm or death.

Actions:

Site managers should direct their staff to:

- Read and implement, as appropriate, all lessons learned from Type A and Type B accident investigations specific to electrical events within DOE.
- Ensure NFPA 70E recommendations, which have been part of DOE O 440.1A since 1995, flow down to all appropriate contractors and their subcontractors.
- Ensure NFPA 70E requirements have been implemented into all work control documents.
- Conduct routine walkthroughs and assessments of EM work to ensure compliance with electrical PPE requirements.

Questions concerning this EM Safety Alert should be directed to Tom Evans, Terry Tracy, or Bob Murray at (202) 586-5151.